



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/610,461	07/05/2000	Juha Ojanpera	460-009524-US(PAR)	4189
2512	7590	01/19/2005	EXAMINER	
PERMAN & GREEN 425 POST ROAD FAIRFIELD, CT 06824			OPSASNICK, MICHAEL N	
			ART UNIT	PAPER NUMBER
			2655	

DATE MAILED: 01/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary****Application No.**

09/610,461

**Applicant(s)**

OJANPERA, JUHA

**Examiner**

Michael N. Opsasnick

Art Unit

2655

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --***Period for Reply****A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) Responsive to communication(s) filed on 10 December 2004.  
2a) This action is **FINAL**.      2b) This action is non-final.  
3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) Claim(s) 1-47 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) Claim(s) \_\_\_\_\_ is/are allowed.  
6) Claim(s) 1-47 is/are rejected.  
7) Claim(s) \_\_\_\_\_ is/are objected to.  
8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) The specification is objected to by the Examiner.  
10) The drawing(s) filed on 07 May 2000 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All    b) Some \* c) None of:  
1. Certified copies of the priority documents have been received.  
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) Notice of References Cited (PTO-892)      4) Interview Summary (PTO-413)  
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)      Paper No(s)/Mail Date. \_\_\_\_\_.  
3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.      5) Notice of Informal Patent Application (PTO-152)  
6) Other: \_\_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumoto et al (5819212) in view of Manjunath et al (6691084).

As per claims 1,21,27,30,38,40-47, Matsumoto et al (5819212) teaches coding a audio signal:

“examining a part of the audio signal.....to be coded.....producing a set of predicted.....pitch predictor orders” as LPC analysis (Fig. 1, subblock 130);  
“determining a coding efficiency....using the determined coding efficiency.....to be coded....by using information....audio signal to be coded” as band splitting and coding at different rates (fig. 5, col. 10 lines 19-65) and V/UV decisions based on the input signal (col. 11 lines 1-24);  
“determining.....error.....prediction signals” as error signal, and choosing the coefficients to reduce such error signal (col. 11 lines 25-40).

Matsumoto et al (5819212) does not explicitly teach using the determined coding efficiency to select a pitch predictor order for the selected coding method by comparing coding efficiencies, however, Manjunath et al (6691084) teaches selecting the pitch predictor order according to the coding mode, wherein the coding efficiencies are determined for that particular type of frame, and hence the predictor order is chosen based on that type of frame (col. 15 line 49 – col. 16 line 11 → NELP, PPP, and CELP; each has a different pitch predictive order that is used according to each coding method). Therefore, it would have been obvious to one of ordinary skill in the art of audio coding to modify the teachings of Matsumoto et al (5819212) with using the determined coding efficiency to select a pitch predictor order for the selected coding method because it would improve the coding efficiency of each frame based on the content of each frame (Manjunath, col. 1 line 55 – col. 2 line 9).

As per claim 2, Matsumoto et al (5819212) teaches predictive coding (Fig. 1, subblock 130).

As per claims 3,29,32,36,37, and 39, Matsumoto et al (5819212) teaches prediction based on input audio (Fig. 1, subblock 130).

As per claims 4,22,28,31, Matsumoto et al (5819212) teaches CELP based encoding using error calculations (col. 10 lines 59-65).

As per claims 5-13,23,35, Matsumoto et al (5819212) teaches the calculation of distortion errors based on frequency information and coding efficiency (col. 20 lines 20-45).

As per claim 14, Matsumoto et al (5819212) teaches MDCT (col. 18 lines 23-50).

As per claims 15,24,33, and 34, Matsumoto et al (5819212) teaches data order, lag, pitch predictor coefficients, and error information (col. 18, lines 20-65).

As per claims 16,17, and 25, Matsumoto et al (5819212) teaches input speech frames (Fig. 6a,b, and c).

As per claims 18,19, Matsumoto et al (5819212) teaches a least squares method, and the coding error derived from the predictive error (col. 20 lines 15-58).

As per claims 20,26, Matsumoto et al (5819212) teaches a transmitting device (col. 1 lines 1-15).

As per claim 44, the combination of Matsumoto et al (5819212) in view of Manjunath(6691084) teaches calculating a reference value, comparing reference values, and making a determination based on this reference value (Manjunath et al (5819212)), as calculating initial values of the frame -- fig. 3, subblock 302, classifying the frame - fig.

3, subblock 304, and based upon the value of the parameters, choosing the appropriate mode -- fig. 3, subblocks 310-314).

***Response to Arguments***

3. Applicant's arguments filed 12/10/2004 have been fully considered but they are not persuasive. As per applicant's arguments that the obviousness statement is based on impermissible hindsight, examiner disagrees and argues that the coding efficiencies of the differing coding methods (as disclosed by Manjunath) are a function of the pitch predictor order (the amount of voicing in the frame dictates pitch predictor order); therefore, it logically follows that using a determined coding efficiency will automatically select the appropriate predictor order. The obviousness statement in the above rejection pertains to the combination of Matsumoto in view of Manjunath, not Manjunath in view of applicant's disclosure. Furthermore, motivation to combine was given above as found in the Manjunath reference.

With respect to applicant's arguments on page 19 of the response, examiner argues that the applicant is reading the specification into the claim language (pertaining to "varying a pitch predictor"); the claim language scope pertains to selection of pitch predictor order, not variation within the coding differences. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Art Unit: 2655

***Conclusion***

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**or faxed to:**

(703) 872 9314,

(for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Opsasnick, telephone number (703)305-4089, who is available Tuesday-Thursday, 9am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ms. Doris To, can be reached at (703)305-4827. The facsimile phone number for this group is (703)872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group 2600 receptionist whose telephone number is (703) 305-4750, the 2600 Customer Service telephone number is (703) 306-0377.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

mno



DAVID L. OMETZ  
PRIMARY EXAMINER